

# Solar For All California

**Fifth Program Quarter: June 1, 2011 – August 31, 2011**

This report summarizes fifth quarter (Qtr 5) activity for Solar for All California, a Department of Community Services and Development (CSD) pilot program.

## Background

A typical household spends about 7.2 percent of their income on residential energy expenditures. A low-income household, however, can spend up to 16.4 percent of their income on residential energy expenditures, according to the LIHEAP Home Energy Notebook for FY 2009.

To further energy cost reduction benefits for California's low-income households under the Low Income Home Energy Assistance Program (LIHEAP), CSD challenged its existing energy providers to design a program to install rooftop photovoltaic (PV) solar systems on low-income homes at no cost to the resident. The resulting pilot program is called "Solar for All California."

Using a competitive bid process, CSD made a total of \$14.7 million in 2009 LIHEAP funds available and asked interested energy providers to submit proposals meeting the following overall objectives:

- Install optimally-sized PV systems totaling 1.5 megawatt (MW) or more on up to 500 single- or multi-family homes.
- Develop creative partnerships to provide systems with no loans, no liens and no out-of-pocket costs for the low-income home owners or residents.
- Put Energy Efficiency first to further reduce the energy consumption of each home before installing PV.
- Develop "Green" jobs by training low-income workers to become solar installers.

Four energy providers were selected:

- CRP – Community Resource Project
- CCES – Central Coast Energy Services
- Fresno EOC - Fresno Economic Opportunities Commission
- NCES – North Coast Energy Services

Based on the proposals selected, the original goal under the pilot program of installing solar systems on 500 homes was increased to 1,000 homes, which will achieve reduced energy costs for 1,000 low-income households across California. Under Qtr 5, the pilot program has nearly reached the 1,000 unit goal in approved units, with 994 units now approved for installation totaling 1.3 MW of renewable power. Through these approved units, the energy providers are leveraging an additional \$2.25 million dollars outside of CSD's Solar for All California award.

The pilot program was slated to wrap up in October 2011, however as with many new pilot programs, the Solar for All California pilot program required a learning curve, in particular for one of the agencies that took a very unique approach in targeting multi-family dwellings. Therefore, additional time has been granted to fully complete the program through Spring 2012.

## Summary of Agency Goals and Partners

	NCES	Fresno	CRP	CCES
Original Unit goal	148	151	200	600
Unit type	Single-family	Single-family	Single-family	Multi-family
Counties Covered	Lake, Marin, Mendocino, Napa, Solano, Sonoma, Yolo	Fresno, Merced, Madera, Tulare, Kings, Kern	Sacramento	Los Angeles, Orange, Yuba, Sutter, San Diego, Placer, San Luis Obispo, Kings, Imperial, Butte, Santa Cruz, Monterey, Riverside, San Bernardino, Santa Clara
Major Installation Partners/Subs	Gaia Energy Real Goods Solar	Sundowner Solar Fresno CCC	Solar Manufacturer Gaia Energy	ACCES Morgan Stanley Main Street Power
CSD Provider Partners	None	Merced Co, CSET, KCAO, Kern Co	None	Butte Co, Riverside, Orange Co, SLO, CES, CRP, CUI, KCAO, MAAC, Maravilla, PACE

## Agency Progress Toward Goals

- CSD reviews and approves each project prior to installation, gathering data and confirming that agencies are within their contracted dollar per watt goals. These projects are listed on the chart below as “Approved.”
- Once the project is complete, agencies send CSD a copy of the final building permit. When the permit is received by CSD, the project is counted as “Installed.”

	NCES	Fresno	CRP	CCES	Total
Goal	148	151	200	600 (multi-family)	1,099
Approved	150	156	93	595 (multi-family)	994
Installed	144	150	50	0	344

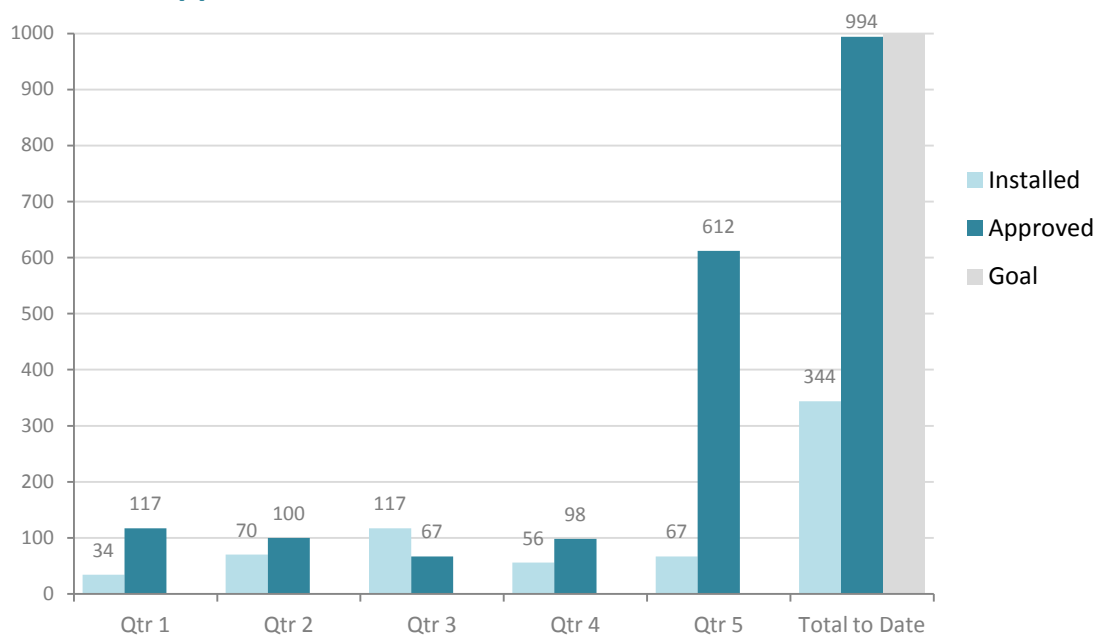
## Renewable Power Generated

One of the goals in the Solar for All California pilot program is to generate a total of 1.5 MW, equal to 1,500 kilowatts (kW) of renewable power through the installation of the rooftop solar systems on low-income homes around the state.

There is no perfect PV size for a home. A small, 1.5 kW system can reduce a home's electric bill and drop it into a lower utility "tier" (a stepped billing system used by most utilities where the rate increases as usage goes up). A larger system can reduce a household's electricity use even further—even by 100 percent.

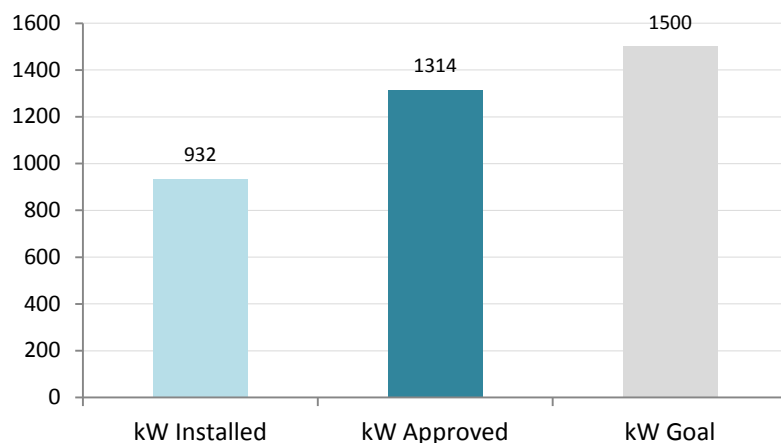
CSD's primary sizing criteria for agencies was to not install "over-sized," systems meaning systems designed to generate more electricity than the home needs, in order to be able to provide solar systems to as many low-income households as possible. Additionally, installations can often be limited in size by the amount of useable roof area, so installed PV system sizes under the pilot program range from 1.7 kW to 4.5 kW.

## Number of Units Approved and Installed to Date



Qtr 1 - 4 numbers shown on this chart may not match those shown on previous Quarterly Reports. This is because installation information is often received from agencies after a quarterly report is completed; numbers are updated when new information is received.

## Number of kW Approved and Installed to Date



## Agency Updates

### NCES

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NCES continues to wrap up their solar contract, installing systems on a few remaining homes. At the end of Qtr 5, NCES was just four systems away from reaching the unit goal specified in their original proposal to install 148 single-family PV systems.

As discussed earlier in this report, unit numbers and kW size can vary. Because the cost of a PV installation is primarily dependent on the kW size, and because there were a lot of unknown factors going into a pilot to install PV on low-income households, NCES has been able to spread their original grant amount further than originally anticipated. This has allowed NCES to increase the number of units.

At the end of Qtr 5, NCES had 150 units approved for installation, with 144 units installed. Once fully installed, these 150 units will generate 430 kW of renewable electricity, or nearly one third of the total Solar For All California goal of 1.5 MW.

### Fresno EOC

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Fresno EOC has nearly achieved their goal of installing 151 single-family PV systems, and is embarking on a new phase of the solar pilot to spend out remaining funds. Remaining funds have allowed for the approval of additional units, with a total of 156 units now approved for installation, which will generate a total of 401 kW of renewable power.

Fresno has extended their Solar For All California contract for six months to accommodate a partnership with Grid Alternatives, the program administrator for the California Solar Initiative's Single-Family Affordable Solar Homes (SASH) program. Under this partnership, Fresno EOC will leverage a portion of its remaining program resources with Grid Alternatives' SASH program to install at least 16 single-family PV systems, in addition to the original 151 unit goal. Grid Alternatives will pay for assessments, materials, permitting and tools, and Fresno EOC will provide labor, using its trained Local Conservation Corps members to install solar power systems on low-income homes.

Training Corps members in "Green" job skills was an important part of Fresno's original proposal, and the partnership with Grid Alternatives supports that goal.

## CRP

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With the addition of Gaia Energy Systems to their solar team, CRP has made substantial progress toward their goals in Qtr 5. At the end of Qtr 4, CRP had 16 projects approved and 12 installed, but by the end of Qtr 5, those numbers have increased to 93 projects approved and 50 installed. Projects approved to date total nearly 250 kW of renewable power.

CRP's original intent was to design and install all of its own solar projects. And though CRP trained staff in all aspects of solar—and began doing installs—they found themselves spending most of their time and staff resources installing weatherization projects under the American Recovery and Reinvestment Act (ARRA).

CRP will continue to design and install solar projects as time allows and believes that, working together with Gaia, they will achieve their original project goals. With the addition of Gaia, CRP designed and installed about 25 percent of their Qtr 5 projects, while Gaia completed the balance.

## CCES

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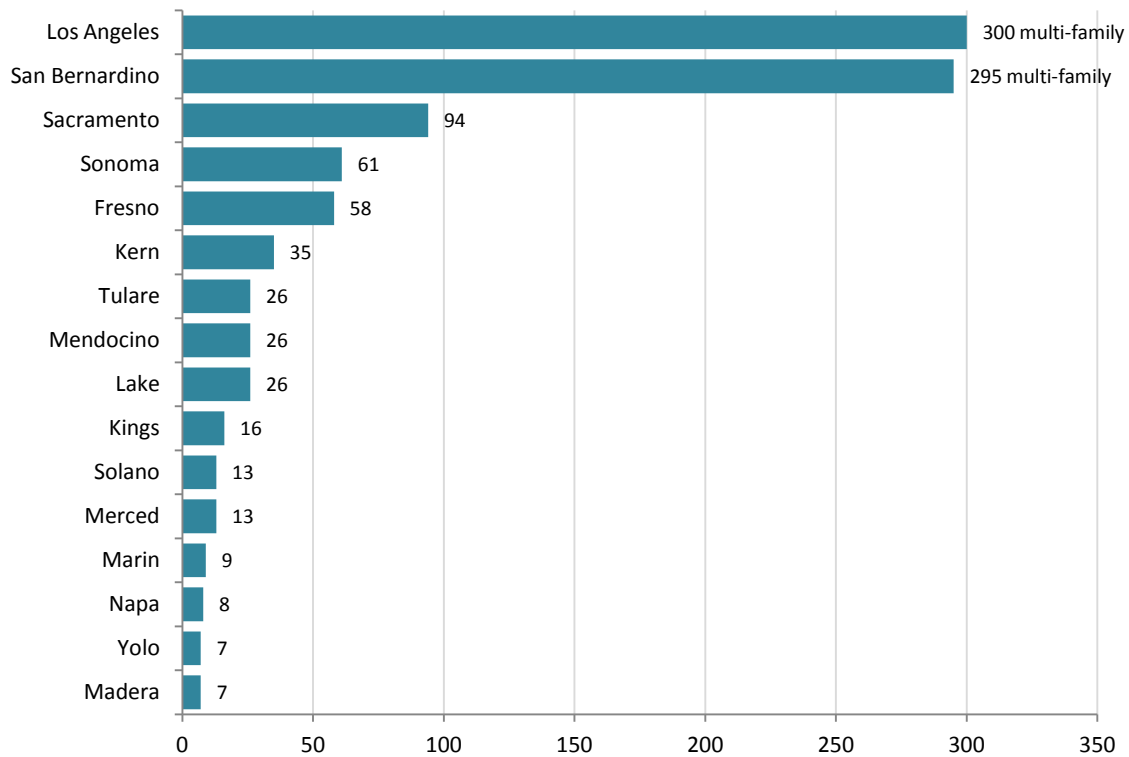
CCES and their program consultant, ACCES, are working via a public-private partnership with Morgan Stanley, an investment company, to install PV systems that will benefit up to 600 multi-family units. The complexity of the model has caused delays including a longer than expected local permitting process before projects can break ground, but CCES continues to work toward program success.

Installation on three multi-family buildings is currently underway that will benefit 220 individual units and generate nearly 100 kW of renewable electricity.

During Qtr 5, CCES received approval for a total of seven multi-family buildings. If all projects reach completion, they will benefit 595 units and generate a total of 230 kW of electricity.

## Other Facts and Figures

**Total Units approved, by county (single family units, unless noted):**



**Total Units Approved, by utility (single family units, unless noted) :**

